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# XI NEW SPECIES OF CEANOTHUS

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# Ceanothus cyaneus Eastwood, new species

Tall shrub with erect gray-green branches; leaves ovate-elliptical, thin, green on both surfaces, the upper glabrous, the lower when young somewhat pubescent, 1-2 cm. long, 1-1.5 cm. wide; margin glandular-denticulate, apex and base obtuse, petioles 2-4 mm. long; flowers in numerous large panicles 2-4 dm. long, terminating the branches, bracts conspicuous in bud, brown, striate, lanceolate-acuminate, appressed-pubescent, deciduous; flowers dark blue in bud becoming lighter in anthesis with yellow conspicuous anthers; pods deeply 3-lobed not crested; yellowish, veiny, glossy as if varnished.

This species is related to *Ceanothus thyrsiflorus* Esch., differing in the leaves, lighter green, thinner, less strongly veined and not revolute, the unusual color of the flowers and the yellow pods. It is certainly the loveliest of all the species of Ceanothus with its large sprays of beautiful blue flowers. On account of its unusual beauty it promises to become extensively cultivated and has already been introduced into cultivation by the nurserymen and seed dealers of southern California. It is a rapid grower according to Miss Sessions and April 27, 1927

blooms later than other species and almost continuously in cultivation.

Type: No. 139336, Herb. Calif. Acad. Sci., collected by Miss Myrtle Phillbrook at Lakeside, San Diego Co., Calif., at an elevation of about 1500 feet, in April, 1920, and sent to the California Academy of Sciences by Miss Kate O. Sessions whose attention was called to it by Miss Phillbrook and her brother.

## Ceanothus insularis Eastwood, new species

Stiff, branching, shrub with gray or brown bark, the young branches clothed with fulvous tomentum: leaves opposite or closely alternate, elliptical, entire, obtuse, the pinnate veins and mid-rib fulvous tomentose and conspicuous on the finely canescent lower surface, upper surface bright green and glabrous, 2-4 cm. long, 1-1.5 cm. broad; flowers white or pale lavender with dark eye at the center formed by the disk and ovary; calyx about 6 mm. across, the divisions ovate acute, 3 mm. wide and with a central rib; umbels fulvous tomentose in bud on peduncles 1-1.5 cm. long; fruit about 8 mm. in diameter, without crests or inconspicuous ones low on the sides.

This species is closely related to *C. crassifolius*, from which it differs in leaves, flowers and pods. In his Botany of Santa Cruz Island (Bull. Calif. Acad. Sci., II, 393) Dr. E. L. Greene reported it as *Ceanothus crassifolius* Torr., probably on account of the prevailing opposite character of the leaves. It entirely lacks the dense white tomentose lower leaf surface of that species.

Flowering specimens were collected in the spring of 1919 on Santa Cruz Island by Mrs. Alonson Swain. Fruiting specimens were collected by the author on the same island, July 17, 1917 (Herb. No. 81312). Dr. Barton Warren Evermann collected it also on Santa Cruz Island in fruit, May 18, 1919. (Herb. No. 81311). Mr. Ezra C. Knapp collected it on Santa Catalina Island in both flower and fruit in the spring of 1926 (Herb. No. 139337). There are also flowering specimens in cultivation from seeds brought from Santa Rosa Island in our herbarium (Nos. 54885 and 54872).

Type: No. 81310, Herb. Calif. Acad. Sci., collected by Mrs. Alonson Swain on Santa Cruz Island, Calif., in the spring of 1919.

## Ceanothus utahensis Eastwood, new species

Shrub, 2-3 dm. high, with rigid divaricately spreading dark gray puberulent branches often becoming thorny when old. Leaves elliptical, 1-2.5 cm. long, 5-1.5 mm. broad, entire, 3-nerved from the base, green and glabrate, the upper surface but little darker than the lower, apex obtuse, petioles 1-3 mm. long, puberulent, surpassed by the brown membranous evanescent stipules. Flowers white in short almost sessile racemes clustered at the ends of the branches, pedicels slender fascicled, 4-5 mm. long. Fruit unknown. This species belongs near *Ceanothus integerrimus* H. & A., but differs in the low spreading habit, almost sessile racemes and the leaves almost equally green on both surfaces. The racemes come from the old wood and almost every branch terminates in a flower cluster.

Type: No. 81309, Herb. Calif. Acad. Sci., collected by Alice Eastwood June 24, 1918, at Soldier's Summit, Central Pacific Railway, Utah.